REMARKS

Initially, Applicants would like to express their appreciation to the Examiner for the detailed Official Action provided, for acknowledgement of Applicants' Information Disclosure Statements by return of the FORM PTO-1449's, and for acknowledgement that the drawings are acceptable.

Further, Applicants note that on page 10 of the Official Action, under the subheading entitled "Conclusion", the Examiner has indicated that the Official Action dated July 6, 2006 is a Final Official Action. However, Applicants note that the previous Response (filed May 22, 2006) was accompanied by a Request for Continued Examination. Therefore, it would appear that the outstanding Official Action is a Non-Final Official Action as indicated on the FORM PTOL-326. Accordingly, Applicants presume that the indicated Finality of the outstanding Official Action (indicated on page 10 of the Official Action) is in error, and respectfully request that the Examiner indicate that same in the next Official communication.

Upon entry of the above amendments claims 1, 22 and 23 will have been amended, and claim 26 will have been canceled (without prejudice or disclaimer to the subject matter contained therein). Claims 1, 10-25, and 27-31 are currently pending. Applicants respectfully request reconsideration of the outstanding objection and rejections, and allowance of all the claims pending in the present application.

Initially, Applicants respectfully submit that the Examiner's basis for

rejecting many of the claims is unclear. In this regard, Applicants submit that the Examiner has not specifically indicated which combination of references lack particular features and specifically how these features are purportedly supplied by the numerous cited secondary references. For instance, on Page 4 of the Official Action the Examiner states that "[c]laims 10-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over one of the combination of refs listed in the rejection against the base claims, and further in view of SHIGA." However, the Examiner has not indicated specifically which deficiencies of which reference(s) SHIGA purportedly cures. Therefore, among other things, it is unclear whether the Examiner is modifying a "modifying reference" (which would be improper) or whether the Examiner has proper motivation for combining the teachings of the numerous references. Further, when proceeding through the Official Action the ambiguity of the basis for rejection worsens because the Examiner continues to refer to "one of the combination of refs listed in the rejection" (see page 7, paragraph 5, of the Official Action) without indicating the specific reference(s).

Accordingly, Applicants respectfully request that the Examiner expressly and clearly set forth his basis for rejecting each and every claim of the present claimed invention. Nevertheless, in the present Response, Applicants have made an earnest attempt to reply to the merits of the rejections contained in the outstanding Official Action. Further, because the Examiner's basis for rejecting many of the claims is unclear, Applicants respectfully request that any subsequent adverse Official Action be made Non-Final.

In Paragraph 2 of the Official Action, the Examiner rejected claims 1 and 23 under 35 U.S.C. § 103(a) as being unpatentable over either one of IVANICS (U.S. Patent No. 4,745,318) or KLODE (U.S. Patent N0. 6,703,740) or DE 19548117 hereinafter "DE '117" or MASIKI (JP-04-325860) in view of either one of ITAYA (U.S. Patent No. 5,500,994) or IMAI et al. (JP-53-138005);

Claims 10-12 *appear* to have been rejected under 35 U.S.C. § 103(a) as being unpatentable over at least one of the rejections of Paragraph 2, and further in view of ELLIOT et al. (U.S. Patent No. 4,694,210);

Claims 10-15 *appear* to have been rejected under 35 U.S.C. § 103(a) as being unpatentable over at least one of the rejections of Paragraph 2, and further in view of SHIGA et al. (U.S. Patent No. 6,093,984);

Claims 16-21 *appear* to have been rejected under 35 U.S.C. § 103(a) as being unpatentable over at least one of the rejections of Paragraph 2, and further in view of BERNREUTHER et al. (U.S. Patent Pub. No. 2003/0168925);

Claim 22 *appear* to have been rejected under 35 U.S.C. § 103(a) as being unpatentable over at least one of the rejections of Paragraph 2, and further in view of KUMAKURA (U.S. Patent No. 4,227,105); and

Claims 24-31 *appear* to have been rejected under 35 U.S.C. § 103(a) as being unpatentable over at least one of the rejections of Paragraph 2, and further in view of BERNREUTHER et al. (U.S. Patent Pub. No. 2003/0168925).

Applicant respectfully traverse the above-noted rejections of claims 1, 10-25 and 27-31 under 35 U.S.C. § 103(a).

Although Applicants do not necessarily agree with the Examiner's rejection of the claims on these grounds, Applicants nevertheless have amended independent claims 1, 22 and 23 to more clearly obviate the above-noted grounds of rejection solely in order to expedite prosecution of the present application. In this regard, Applicants note that the applied prior art fails to teach or suggest the combination of elements as recited in amended claims 1, 22 and 23, in particular, claims 1 as amended, sets forth a single phase induction motor including, inter alia, a generally cup-shaped supporter having an open end and a closed end, wherein the open end of the supporter is integrally injection-molded to an axially-facing end of the magnet unit.

Applicants submit that the applied prior art, alone or in any proper combination, lacks any disclosure of at least the aforementioned features.

In this regard, the Examiner acknowledges that IVANICS, KLODE, DE '117 and MASIKI all lack any disclosure of the supporter being integrally injection-molded at one side of the magnet unit (see page 3, paragraph 2, of the Official Action). Nevertheless, the Examiner takes the position that it would have been obvious to supply the aforementioned-deficiencies of the above-noted references with the purported teachings of either one of ITAYA or IMAI. However, ITAYA discloses element 31, which the Examiner has characterized as being a supporter, provided radially within the magnetic layer 32. Similar to ITAYA, IMAI also discloses the supporter (10) being provided radially within the magnet (3). Therefore, neither IVANICS, KLODE, DE '117, MASIKI, ITAYA, or IMAI, alone or in any proper combination, disclose at least a generally cup-

shaped supporter having an open end and a closed end, wherein the open end of the supporter is integrally injection-molded to an axially facing-end of the magnet unit.

Thus, even assuming, arguendo, that the teachings of IVANICS, KLODE, DE '117, MASIKI, ITAYA, and IMAI have been properly combined; the proposed combination still would not have resulted in the features of the embodiments of the present disclosure, as recited in amended claim 1.

Further, the Examiner has not presented sufficient motivation for the proposed modification, and the only reason to combine the teachings of the applied prior art results from a review of Applicants' disclosure and the application of impermissible hindsight.

Applicants further submit that independent claim 22, as amended, is generally similar to independent claim 1 in that it recites, inter alia, a generally cup-shaped supporter having an open end and a closed end, wherein the open end of the supporter is integrally injection-molded to an axially-facing end of the magnet unit. Therefore, claim 22 (as well as claims 16-21 dependent therefrom) is allowable for reasons generally similar to independent claim 1.

Applicants further submit that independent claim 23, as amended, is generally similar to independent claim 1 in that it recites, inter alia, the magnet being coupled to a generally cup-shaped supporter having an open end and a closed end, and wherein the supporter is integrally injection-molded to an axially-facing end of the ring magnet unit. Therefore, claim 23 (as well as claims 24, 25

and 27-31 dependent therefrom) is allowable for reasons generally similar to independent claim 1.

A further aspect of an embodiment of the present disclosure as recited in claim 12, sets forth a single phase induction motor, inter alia, wherein the back yoke is a non-magnetic substance.

Applicants further submit that the rejections of Paragraph 2 in view of ELLIOT, alone or in any proper combination, lack any disclosure of the aforementioned feature.

In this regard, the Examiner acknowledges that neither of the applied prior art listed in the rejections of Paragraph 2, nor ELLIOT, discloses the back yoke being a nonmagnetic substance (see Page 4, lines 22-27, of the Official Action). Nevertheless, the Examiner asserts that the selection of a nonmagnetic substance is a matter of obvious design choice. However, Applicants submit that the Examiner's assertion is without any factual support. In this regard, at least one advantage of providing the above-noted feature is that a single phase induction motor which can increase efficiency by reducing loss of current and reducing noise (Page 3, lines 6-8 of the present disclosure) can be achieved. Accordingly, the rejection is improper and should be withdrawn. Further, if the Examiner decides to maintain the above-noted obvious design choice rejection, Applicants respectfully request that the Examiner provide an appropriate teaching reference evidencing the same.

A further aspect of an embodiment of the present disclosure as recited in claim 15, sets forth a single phase induction motor, inter alia, wherein thickness of the back yoke is .2~.6 mm.

Applicants further submit that the rejections of Paragraph 2 in view of SHIGA, alone or in any proper combination, lack any disclosure of the aforementioned feature.

In this regard, the Examiner acknowledges that neither the applied prior art listed in the rejections of Paragraph 2, nor SHIGA, discloses the aforementioned thickness of the back yoke (see Page 5, lines 18-23, of the Official Action). Nevertheless, the Examiner asserts that it would have been obvious to find the optimum workable range. Applicants submit that the Examiner's assertion is without any factual support. Further, at least one advantage of the aforementioned range is that, by providing the yoke with a thickness of between .2~.6 mm, a motor with the desired electric power consumption and rpm's can be achieved (see FIG. 9, and page 8, line 23- page 9, line 9).

Further, it is well-settled law that a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). Applicants submit that the Examiner has made no such showing. Accordingly, the rejection is improper and should be withdrawn. Further, if the Examiner decides to maintain the above-noted obvious

optimization rejection, Applicants respectfully request that the Examiner provide an appropriate teaching reference indicating the same.

Applicants further submit that claims 24, 25, and 27-31, recite additional features of the present disclosure. In particular, claims 24, 25, and 27-31, recite a single phase induction motor including, inter alia, a supporter coupled to one end of the ring magnet for supporting the ring magnet; wherein the supporter is a non-magnetic substance; wherein the supporter is integrally injection-molded at both sides of the ring magnet; wherein the supporter is formed of the same material as the ring magnet; wherein the bearing is a ball bearing type; wherein the bearing is an oilless bearing type; and wherein the ring magnet comprises a single magnetic element having a cylindrical shape, respectively.

However, the Examiner asserts that providing the above noted features is a matter of obvious design choice. However, the Examiner's assertion is without any factual support. Further, at least one advantage of providing the above-noted features is that a single phase induction motor which can increase an efficiency by reducing loss of current and reducing noise can be achieved (Page 3, lines 6-8 of the present disclosure). Accordingly, the rejection is improper and should be withdrawn. Further, if the Examiner decides to maintain the above-noted obvious design choice rejection, Applicants respectfully request that the Examiner provide an appropriate teaching reference indicating the same.

A further aspect of an embodiment of the present disclosure, as recited in amended claim 22, sets forth, inter alia, a magnet unit freely and rotatably installed between the stator and the rotor, the magnet unit being separated from

the stator by a first air gap and from the rotor by a second air gap, wherein the magnet unit comprises a molding formed of resin and provided with a plurality of pockets therein, and a plurality of magnets respectively mounted in the corresponding plurality of pockets such that the molding covers over an entire area of each magnet in both an axial and circumferential direction of the molding, and wherein a supporter is integrally injection-molded at one side of the molding.

Applicants further submit that the rejections of Paragraph 2, in view of KAMAKURA, alone or in any proper combination, lack any disclosure of the aforementioned features.

The Examiner cites to KAMAKURA, element 41, as purportedly teaching a molding completely surrounding each magnet. However, the magnets (29) as disclosed in KAMAKURA are clearly exposed from the molding along the outer circumferential and inner circumferential surfaces of the magnets (FIG. 3). Thus, KAMAKURA does not disclose a plurality of pockets in the molding, with a plurality of magnets respectively mounted in the corresponding plurality of pockets such that the molding covers over an entire area of each magnet in both axial and circumferential directions of the molding, as recited in amended claim 22.

Thus, even assuming, arguendo, that the teachings of the references listed in Paragraph 2 and KAMAKURA have been properly combined; the proposed combination still would not have resulted in the features of the embodiments of the present disclosure, as recited in amended claim 22.

Applicants further submit that dependent claims 10-21, 24-25 and 27-31 are at least patentable due to their respective dependencies from claims 1, 22 and 23 for the reasons noted above. In this regard, Applicants note that the Examiner has provided no explanation or motivation for correcting the above-noted deficiencies in the teachings of the references listed in Paragraph 2. Applicants further submit that neither ELLIOT, SHIGA, BERNREUTHER nor KUMAKURA, provide any teachings which could reasonably be characterized curing the above-noted deficiencies in the teachings of the references listed in Paragraph 2. In this regard, neither ELLIOT, SHIGA, BERNREUTHER nor KUMAKURA disclose a generally cup-shaped supporter having an open end and a closed end, wherein the open end of the supporter is integrally injection-molded to an axially-facing end of the magnet unit.

Applicants further submit that claims 10-21 and 24, 25 and 27-31 recite additional features of the invention, and are also separately patentable over the prior art of record. Accordingly, the rejection of claims 1, 10-25 and 27-31 under 35 U.S.C. § 103(a) is improper for all the above reasons and withdrawal thereof is respectfully requested.

In view of the arguments herein, Applicants submit that independent claims 1, 22 and 23 are in condition for allowance. With regard to dependent claims 10-21, 24-25 and 27-31, Applicants assert that they are allowable on their own merit, as well as because they depend from independent claims 1, 22 and 23, which Applicants has shown to be allowable.

Thus, it is respectfully submitted that all of the claims in the present application are clearly patentable over the references cited by the Examiner, either alone or in combination, and an indication to such effect is respectfully requested, in due course.

SUMMARY

Applicants submit that the present application is in condition for allowance, and respectfully request an indication to that effect. Applicants have argued the allowability of the claims and pointed out deficiencies of the applied reference. Accordingly, reconsideration of the outstanding Official Action and allowance of the present application and all the claims therein are respectfully requested and is now believed to be appropriate.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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